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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,525	12/02/2004	Morita Kazuaki	MOR-C498	4474

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EXAMINER
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MOONEY, MICHAEL P

ART UNIT	PAPER NUMBER
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2883

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/516,525

Applicant(s)

KAZUAKI ET AL.

Examiner

Michael P. Mooney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/17/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

"PAD" is presented in capital letters leading one to believe it is an acronym, yet, what the letters "P", "A", and "D" of PAD stand for is not related in the Specification properly.

"PAD" is not well-known in the art. To illustrate, a simple search was done to see whether "PAD" (in capital letters) and "connector" occur in the same paragraph. In an art with 10,700 patents/PGPUB that have the word "connector", a reasonable person would expect that if "PAD" was well known, there would at least be quite a few of the 10,700 patents with the word "PAD" in the same paragraph as connector. The result: two patents. One of the two said patents is the PGPUB of the instant application and the other has a common attorney/assignee.

So, granted, the phrase "PAD connector" is very new to the art. Thus Applicant is referred to the excerpt below on the content of the Specification and asked to pay particular attention to section/paragraph "(j)". Particularly, in (j) it states:

However, .... where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which ***adequately describes the subject matter***. [Emphasis Added].

More details consistent with the said section/paragraph "(j)" are in order.

### Content of Specification

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- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet

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published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The groups and examples are not correctly matched. Please ensure there is a correct match between each respective group mentioned and examples meant to be paired with the said respective group in claim 7.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

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351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-3, 6-8 are rejected under 35 U.S.C. 102e as being anticipated by Farroni et al. (20040086425).**

Farroni et al. teaches an optical filter (e.g. paragraph 0071) comprising: a core; and a cladding formed on the outer periphery of said core (e.g., figs. 1-14) and having a smaller refractive index than that of said core (e.g., figs. 1-14), characterized: in that said core portion contains a damping dopant for adjusting the intensity of a received signal within a permissible range (e.g. paragraph 0166) and a photosensitive dopant (e.g. paragraph 0175) for causing a refractive index change of a long life by the irradiation of an ultraviolet ray (e.g. paragraph 0006; fig. 2); and in that said core portion has a refractive index grating formed for selectively reflecting an input light (e.g. paragraph 0071, 0006-0009). Thus claim 1 is met.

Farroni et al. teaches an optical filter comprising: a core; and a cladding formed on the outer periphery of said core and having a smaller refractive index than that of said core (e.g., figs. 1-14), characterized: in that said core portion contains a damping dopant for adjusting the intensity of a received signal within a permissible range (e.g. paragraph 0166) and a photosensitive dopant for causing a refractive index change of a long life by the irradiation of an ultraviolet ray (e.g. paragraph 0006; fig. 2); and in that said core portion uses an optical fiber having a predetermined length and has a refractive index grating formed for selectively reflecting an input light (e.g., figs. 1-14; paragraph 0071, 0006-0009). Thus claim 2 is met.

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Farroni et al. teaches characterized in that the grating vector of the refractive index grating is the Bragg diffraction grating (e.g., paragraph 0034; paragraph 0006; fig. 2). Thus claim 3 is met.

Farroni et al. teaches characterized in that said damping dopant is made of at least one kind of element selected from transition metallic elements including Co, V, Ni, Ti, Fe, Cr and Mn (e.g. paragraph 0166). Thus claim 6 is met.

Farroni et al. teaches characterized in that the photosensitive dopant is made from elements from the periodic table as intended in claim 7 (e.g. paragraph 0166; paragraph 0175). Thus claim 7 is met.

Farroni et al. teaches characterized in that said photosensitive dopant is contained in a cladding formed on the outer periphery of the core. (e.g., figs. 1-14). Thus claim 8 is met.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.



2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 4-5, 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farroni et al. (20040086425).**

Farroni et al. teaches an optical filter (e.g. paragraph 0071) comprising: a core; and a cladding formed on the outer periphery of said core (e.g., figs. 1-14) and having a smaller refractive index than that of said core (e.g., figs. 1-14), characterized: in that said core portion contains a damping dopant for adjusting the intensity of a received signal within a permissible range (e.g. paragraph 0166) and a photosensitive dopant (e.g. paragraph 0175) for causing a refractive index change of a long life by the irradiation of an ultraviolet ray (e.g. paragraph 0006; fig. 2); and in that said core portion has a refractive index grating formed for selectively reflecting an input light (e.g. paragraph 0071, 0006-0009).

Although Farroni et al. does not explicitly state "chirped grating" it would have been obvious to do so because it is conventionally known to use gratings in the chirped form for numerous applications in the art that are known to one of ordinary skill. One of ordinary skill would have been motivated to make/use a chirped grating for the purpose expanding the usefulness of numerous devices that are described in Farroni et al. Thus claim 4 is rejected.

Although Farroni et al. does not explicitly state "the reflection spectrum of the chirped grating has an inclining function to the wavelength of the incident light", it would

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have been obvious to do so because it is conventionally known for the reflection spectrum of a chirped grating have an inclining function to the wavelength of the incident light. One of ordinary skill would have been motivated to use a chirped grating with an inclining function to the wavelength of the incident light to provide better and more useful coupling. Thus claim 5 is rejected.

Although Farroni et al. does not explicitly teach a ferrule or the various connectors that are typically used with said ferrules, e.g., such as SC et al., it would have been obvious to do so for the purpose(s) of enhancing alignment capabilities, protection, etc. Thus claim 9 is rejected.

Regarding claims 10, 11 it is conventionally known in the art to adapt/modify/use standard connectors such as SC, MU, FC, LC, etc. to accommodate new working situations and/or components. Thus it would have been obvious to one of ordinary skill to adapt/modify/use SC, MU, FC, or/and LC, or/and other connectors for use in a PAD configuration for the purpose of accommodating new working situations and/or components. Thus claims 10 and 11 are both rejected.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael P. Mooney  
Examiner  
Art Unit 2883



Frank G. Font  
Supervisory Patent Examiner  
Art Unit 2883

FGF/mpm  
6/26/06